

ONE AND A HALF YEARS OF KENYAN ORTHOPTERA**1. INTRODUCTION AND TETTIGONIIDAE**

JOHN PAUL

Downsflint, High Street, Upper Beeding, West Sussex BN44 3WN.

WHILST RESIDENT in Nairobi from 1991 to 1993 I was able to study the Orthoptera of Kenya. A representative collection was assembled despite pressure of work and other commitments which limited entomology to occasional weekends and holidays. I had previously entomologised in Kenya during short visits in 1985 and earlier in 1991 before taking up residence. I concentrated on the Acridoidea as these were conspicuous members of the fauna in virtually all habitats during all seasons but other orthopteroids were not neglected and it was impossible to ignore the other vibrant insect life, especially the butterflies.

Kenya is an equatorial country with an enormous variety of environmental conditions ranging from the humid tropical torpor of the coast to grassland, thorn scrub, semi-desert, forest, upland pasture and snows of Mount Kenya. Nairobi, at 5,500 feet on the edge of the Central Highlands, has two wet seasons – the “short rains” around November and the “long rains” from March to May. It is cool and overcast in July and August whilst from January until the start of the long rains it is sunny, hot and dry. In the west it is warm and wet all year round, whilst on the Indian Ocean, the long rains may be torrential but the rest of the year dry. Parts of the Rift Valley, whose axis transects the whole country, are inhospitable semi-deserts. Transport is a major consideration when planning a collecting trip. A four-wheel-drive vehicle is necessary to reach many of the areas of special entomological interest. Two guidebooks (Moore, 1982; Oberlé, 1991) available in Nairobi bookshops, are excellent sources of information on localities outside the usual tourist areas. The 50,000 scale Survey of Kenya maps should reward anyone with the time, patience and diplomatic skills needed to obtain them, which in my case involved a Kafkaesque visit to the Survey headquarters, making enquiries in its numerous offices, presentation of letters in request of maps and an interview with the Deputy Director, during which time I was not allowed to see any maps for security reasons. Two weeks later, I was given permission to collect half the sheets I had requested and at a very reasonable price. Other problems for the entomologist include potentially irritating or dangerous wildlife and humans. Mosquitoes, with the threat of malaria, and tsetse flies may be a nuisance. Outside the game parks dangerous mammals are seldom encountered but snakes are a hazard when entomologising. Even in the remotest places, entomological activities often attract human attention, generally good-natured but inhibiting to the collector.

Identifying Kenyan Orthoptera is daunting to the amateur, requiring reference to scores of papers and access to museum specimens. Many groups



Fig. 1. Highland forest at Eburru, 8,800 feet, home to *Horatosphaga longipes*.

are unrevised, rendering accurate speciation impossible. The National Museum in Nairobi houses a superb entomological collection which is in good order and is actively used by a group of dedicated Kenyan entomologists on the museum staff. I am especially grateful to Mr Michael Mungai for sharing his expertise and I regret that I was unable to collect with him in the field.

Tettigoniidae (bush-crickets)

The Conocephalinae and Phaneropterinae are well-represented in Kenya but the Tettigoniinae (including the former Dectiinae), which dominate the British and European fauna are quite absent.

Conocephalinae

Conehead bush-crickets are locally and seasonally abundant in Kenya wherever there is grassland. A small representative sample of specimens was collected.

Conocephalus conocephalus (L.)

Sokoke Forest, Kenya Glass Track, 1.xii.1991, in long grass, two males, one female. Tumu Tumu, near Karatina, 27.ix.1992, in long grass, two males, three females.

C. iris (Serville)

Malindi, vii.1985, one female.

C. maculatus (Le Guillou)

Masai Mara, vii. 1985, one female. Kakamega Forest, 11.x.1991, one female; 7-9.ii.1992, one male, three females. Malindi, vii.1985, one female.

Phlesirtes merumontanus Sjöstedt

Ngong Hills, on pasture, 19.i.1992, two males, one female.

Gatamayu Forest, 8,000 feet, on pasture, 13.ix.1992, one male.

These examples are indistinguishable from specimens in BM(NH) labelled *Phlesirtes merumontanus* Sjöstedt, from Limuru in the Kenya highlands. A number of species of this unrevised genus have been described from East Africa, some of which may be synonyms.

Ruspolia sp.

Masai Mara, vii.1985, one female.

Oi Doinyo Sabuk, in long grass, 25.i.1992, one female.

This difficult genus is seasonally abundant in grassland. After the rains they can be heard from moving traffic on the road to Nairobi airport.

Phaneropterinae

Phaneropterines do not generally draw attention to themselves, either by their calling songs or by their activity. Several species were collected, mostly through chance finds on shrubs where they often sit motionless, relying on their green colouring for camouflage. The genus *Horatosphaga* Schaum in the group Acrometopae is of special interest because of its marked sexual dimorphism and East African endemism. Identification of most of the material was rendered relatively straightforward by the clearly presented revisionary works of Ragge (1960, 1964, 1980) and by reference to material in BM(NH). I am grateful to Dr David Ragge for identifying some of the more difficult specimens.

Catoptropteryx aurita Huxley

Kilifi, in tree, xi-xii,1991, one male.

Dionconema ornata Brunner

Sokoke Forest, Jilore Track, on shrubs, 16.v.1992, one female. Known from Tanzania and the Kenya coast, this insect has distinctive dark and blue-green markings.

Horatosphaga gracilis (Sjöstedt)

Tigoni Falls, on shrubs, 29.xii.1991, one male. Endemic to the central highlands of Kenya.

H. leggei (Kirby)

Ngong Hills, on nettles, 19.i.1992, one female, one nymph. Widespread in the highlands of east and central Africa.

H. longipes (Bolivar)

Eburru (Doinyo Buru), near Naivasha, on shrubs, 6.xii.1992, one male. Endemic to the Kenya highlands.

Lamecosoma inerme Ragge

Makuyu, near Thika, grassy roadside ditch, 5.vii.1992, one male. This species was collected alongside *Tylopsis rubrescens*, which it superficially resembles on account of its attenuated form and colour pattern of green with a reddish-brown dorsal stripe.

Peronura clavigera Karsch

Makuyu, near Thika, grassy roadside ditch, 5.vii.1992, one nymph. Peponi Road, Nairobi, on shrubs, 19.i.1992, one female. Ol Doinyo Sabuk, on shrubs, 25.i.1992, one female.

Phaneroptera sparsa Stål

Peponi Road, Nairobi. on shrubs, 19.i.1992, one female. Kakamega forest, at light, 7-9.ii.1992, one female. Saiwa Swamp, at light, 12.x.1991, one male. Ngerenya, Kilifi, in dry grass, 21.iii.1992, one male. Nguruman Escarpment, on shrubs, 11.x.1992, one male. Widespread in Africa northward to the Iberian peninsula.

Terpnistria sp.

Samburu National Reserve, attracted to light of camp fire, vii.1985, one nymph. This extends the recorded distribution of this otherwise southern genus north of the equator. The distinctive broad spines on the legs and keeled and patterned pronotum place the specimen in *Terpnistria* Stål but being a nymph it is not possible to determine the species.

Tylopsis rubrescens Kirby

Makuyu, near Thika, grassy roadside ditch, 5.vii.1992, one male. Widespread in Africa.

T. irregularis Karsch

Split Crater, near Lake Elmenteita, in long grass, 13.xii.1992, one male. Widespread in Africa.

Localities: 1. The Central Highlands

The Central Highlands are a land of red volcanic soils, tea plantations, upland pasture and forest. Nairobi at 5,500 feet sits at the interface of the highlands and the plains. Within Nairobi itself Orthoptera occur in suburban gardens and on wasteland. From my own small garden in Hurlingham the following grasshoppers were recorded: *Thericles* sp., *Heteracris brevipennis*, *Parapistaurus* sp., *Morphacris fasciata*, *Trilophidia conturbata*, *Aiolopus thalassinus*, *Gastrimargus verticalis*, *Gymnobothrus* sp., *Gymnobothroides* sp. Nearby, along the Kirichwa Kabwa River, *Catantops curvicercus*, *Paracinema tricolor*, *Paratettix* sp. and the phaneropterine *Peronura clavigera* were found. Orthoptera found at other sites in the city include *Cyrtacanthacris tatarica*, *Acanthacris ruficornis*, *Heteropternis coulouiana*, *Cataloipus* sp., *Acrida sulphuripennis*, *Acrotylus patruelis*. These species are typical of disturbed and degraded habitat in the Central Highlands. The

Ololua Forest at Karen (6,000ft) is a precious remnant of the original Nairobi forest. I was able to visit the area regularly under permit from the Director of the Institute of Primate Research and access to this superb locality helped to make city life more tolerable. During the rains, clouds of butterflies including *Papilio mackinmoni*, *P. nobilis*, *P. jacksoni*, *P. phorcas*, *Charaxes candiope* and *Tirumala formosa* glide along the forest trails. Notable forest grasshoppers include the coptacridines *Paracoptacris cauta* and *Parepistaurus* sp. and the impressive catantopid *Pseudopropacris vana* which is metallic olive green in colour with bright red wings.

Well north of the city at Tigon Falls (7,000ft) relict riverine forest has highland endemics, the attractive grasshopper *Aresceutica vansomereni* and the phaneropterine *Horatosphaga gracilis*. The glossy green pygomorphid grasshopper, *Parasphena kinangopa* is abundant on adjacent pasture. Further north is Gatamayu (Katamayu) Forest (8,000ft), a wonderful slab of submontane forest with streams and tree-ferns. Two highland forest grasshoppers, *Aresceutica vansomereni* and the sexually dimorphic *Kinangopa jeanneli* are present. Continuing westwards across the Rift Valley, another outstanding highland locality is Eburru (8,800ft). Here, the butterflies *Lycaena phlaeas* and *Pontia helice* add a hint of the distant Palaearctic to the local fauna. The Kenyan endemic *Horatosphaga longipes* occurs on bushes and the rich grasshopper fauna includes *Parasphena* sp., *Phymeurus naivashensis*, *Acorypha granulatus*, *Gastrimargus verticalis* and *Acrotylus patruelis*.

To the south and east of Nairobi, two important highland outliers, the Ngong Hills and Ol Doinyo Sabuk rise from the plains. The upland pasture along the Ngong ridge (8,000ft) holds large populations of grasshoppers including two local endemics, *Pezocatantops ngongi* and *Parasphena ngongensis*, whilst the phaneropterine *Horatosphaga leggei* was collected from woodland on the northern slopes. The summit of Ol Doinyo Sabuk (7,000ft) is alive with Clouded Yellows, *Colias electo*. Interesting grasshoppers include *Heteracris brevipennis*, *Aiolopus longicornis* and *Acrotylus somaliensis*. The phaneropterine *Peronura clavigera* occurs in the scrub zone lower down.

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